COMMUNICATING Together

A Quarterly Magazine About Augmentative and Alternative Communication

Vol. 3, No. 2 June 1985

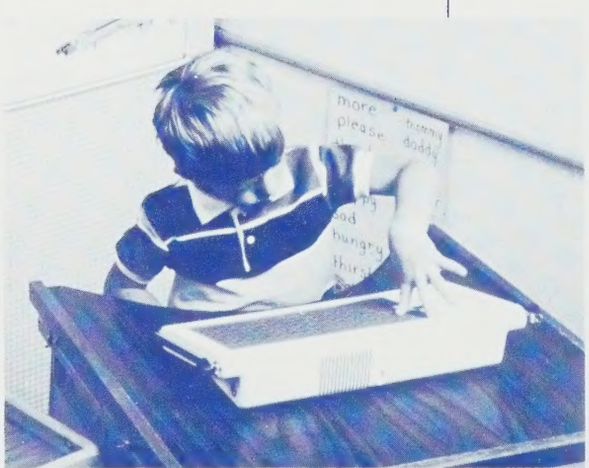
ISSN 0822-0638

PHONIC EAR AND BLISSYMBOLICS COMMUNICATING TOGETHER!

THE NEW PHONIC EAR VÖIS 135

Selecting the appropriate augmentative communication system for the nonspeech person is only part of the total picture. Choosing and organizing a meaningful vocabulary for that person and selecting the symbol system to represent the vocabulary is of obvious importance.

Whether using traditional lithography, pictures, or other symbol systems such as Bliss, it is important that the augmentative communication device be flexible enough to accept a variety of these systems.



THE NEW PHONIC EAR VÖIS 135 GIVES YOU THIS FLEXIBILITY!

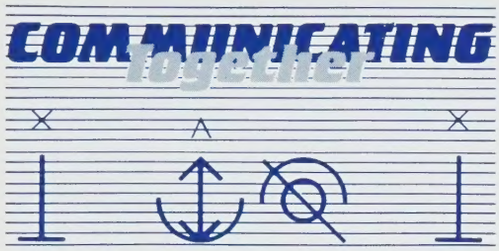
- ☐ *Extended memory and storage for personal information*
- ☐ *Multiple person usage format*
- ☐ *Increased speed and accuracy*
- ☐ *Adaptable to symbol and picture systems*
- ☐ *Teaching/learning tool*
- ☐ *Increased target size as needed*

For more information or a no obligation demonstration, write to:

Phonic Ear

250 Camino Alto
Mill Valley, CA 94941
Toll free: 800/227-0735
Calif: 800/772-3374

7475 Kimbel St., Unit 10
Mississauga, Ontario
Canada L5S 1E7
Toll Free: 800/387-3158



Vol. 3, No. 2 June 1985

Established November 1982.

Published quarterly by Blissymbolics Communication Institute.

Executive Director: Shirley McNaughton

Editor: Sarah Swartz
Managing Editor: Ann Kennedy
Advertising: Lorne Mitchell
Subscriptions: Lesley Carter

Cover: Nola Millin at ISAAC Conference, October 1985. Photo: Lorne Mitchell.

Blissymbols presented herein have been electronically typeset. BCI gratefully acknowledges funding by the Kiwanis Club of Toronto to support the typesetting font development. Typesetting and Printing: The Beacon Herald, Stratford, Ontario.

BCI wishes to recognise and thank the following organizations for their support in sponsoring sections of *Communicating Together*.

- Pilot Club International, Ontario District
- Manufacturers Life Insurance Company, Toronto, Ontario
- Sun Life Assurance Company of Canada, Toronto, Ontario
- Tippet Foundation, Toronto, Ontario

Back Issues: Limited number available, $5. Canadian funds.

Subscription Rate: $20. per year Canadian funds, $15. per year U.S. funds. Bulk orders of 50 units @ $10. per unit - $500. Canadian funds.

Direct correspondence regarding subscriptions, back issues, contributions, sponsoring, advertising, address changes and bulk mailings to:
Communicating Together
Blissymbolics Communication Institute
350 Rumsey Road
Toronto, Ontario, Canada M4G 1R8

Contents

Communicating Together is published quarterly as a means of sharing the experiences, systems and techniques of nonspeaking people with their families, communities and the professionals who work with them. Special attention is given to the nonreader's augmentative communication system and the role of Blissymbolics.

The Blissymbolics Communication Institute was established in 1975 to facilitate the use of Blissymbolics as a communication system for nonspeaking persons around the world.

BCI Affiliates and Information Centres are situated in
Canada: Alberta, British Columbia, Manitoba, Newfoundland and Labrador, Ontario, Quebec
United States: Alabama, Florida, Massachusetts, Michigan, Minnesota, New York, Ohio, Pennsylvania, South Dakota, Vermont
Outside North America: Argentina, Australia, Belgium, Bermuda, Brazil, Denmark, Finland, France, Guam, Hungary, Iceland, India, Israel, Italy, New Zealand, Norway, Portugal, South Africa, Spain, Sweden, Switzerland, the Netherlands, the United Kingdom, Venezuela, West Germany, Zimbabwe

Through BCI and its affiliates, over 8,000 instructors have been trained world wide.

Blissymbolics is a meaning-based, augmentative communication system offering vocabulary, structure and strategies to stimulate communication and cognitive development. It can benefit persons of all age and intellectual levels who have the potential and opportunity for interactive, functional communication. Blissymbolics can be used independently, with a variety of picture systems and technologies, or as a complement to words and spelling.

Blissymbols used herein are derived from the symbols described in the work *Semantography,* original copyright © C.K. Bliss, 1949.

September 1982, C.K. Bliss granted an exclusive, non-cancellable and perpetual, world-wide license to the Blissymbolics Communication Institute, for the application of Blissymbols, for use by handicapped persons and persons having communication, language and learning difficulties.

The symbol composition and drawings appearing in articles are in accordance with *Blissymbols for Use,* compiled and edited by Barbara Hehner, and published by the Blissymbolics Communication Institute, Toronto, 1980.

BCI is a member of the Canadian Rehabilitation Council for the Disabled (CRCD).

Gaining Independence

by Nola Millin

Nola Millin is a student at the University of Windsor, Windsor, Ontario. She is a member of ISAAC, and has been active with the advocacy section. She has participated in various conferences, including ICRE II in Ottawa in June 1984 and the ISSAC meeting in Boston last October. In the following article she discusses her life as a nonspeaking university student.

I hate Wednesdays this semester! They never seem to go smoothly. Up at seven; racing around my room trying to find everything that I need isn't a good way to start off the day. A nine-thirty psychology lab begins the school morning. My lab is followed by a two-hour study (or sleep) period and then two one-hour classes. I get out of those by three. I go home and have just enough time to fix and eat supper before I head back to school for a three-hour class in computer science. If I'm wise I go home right after class, but I'm not always wise!

Does this sound like a typical day in the life of a student? Well, it is. I'm a first year student at the University of Windsor (Ontario) majoring in Communication Studies. Besides the fact that Wednesdays are crazy, I have the additional challenge of being a disabled student in a wheelchair. I have cerebral palsy which has affected my gross and fine motor control as well as my speech. Going to university was always a dream of mine and it has taken a great many struggles to turn that dream into a reality. One of the primary battles was communicating and gaining independence. Without the ability to express and handle myself, I certainly wouldn't be a university student.

I was fortunate enough to have parents who encouraged me to be as independent as possible. My speech has always been an obstacle since it hasn't been understandable to most people. Since I'm an only child, my parents had a great ability of knowing what I wanted. This system worked fine until I reached the age of seven and had more needs to communicate. At age seven, I was given a typewriter and with my grade two spelling I began typing messages. Soon after, an alphabet board was given to me and I was able to express my needs and thoughts in a simplistic manner. About a year after that, Blissymbolics were introduced to me and provided a great means of communication. A speech pathologist and I designed a word and alphabet board that today has an estimated one-thousand words on it which I have used for five years.

I still use my word board, but my speech has improved considerably. Close friends and family are able to understand about 80 percent of what I have to say. The other 20 I spell out by using letters. Although my speech is understandable to those who know me, I am not always around these people. That is the reason I have gotten my personalized VOCA (Voice Output Communication Aid). My VOCA is still in the developmental stage. It was designed at the Artificial Language Laboratory at Michigan State University. My VOCA enables me to communicate with complete strangers and to speak in public.

It was indeed these significant changes in my communication aids that have given me a great deal of independence. Unfortunately all three of my parents (father, mother and stepfather) are deceased and therefore I have been motivated to communicate with other individuals. I now live in an apartment complex called ALPHA. (Apartments for Living for Physically Handicapped Association). Communications and independence are extremely necessary in ALPHA because the tenants have to express their needs and instructions to the staff members. ALPHA makes independent living a must due to the fact that the staff waits until the tenant asks for assistance. (Assistance is given to a tenant in any task that he/she can't physically manage on his/her own.) I think that my speech and communication skills have improved just by living at ALPHA. I have to speak up or go without help!

Prior to moving to ALPHA I conquered a major mountain as far as my educational experience was concerned. In the fall of 1980, I began to integrate into a regular secondary school. I had always attended the Children's Rehabilitation Centre where I received a combination of academic training as well as various therapies and basic skills programs. When I was in grade ten, it was obvious that my academic abilities were going beyond what the Centre had to offer. With a great many struggles, I was accepted at a Catholic Secondary School (and I wasn't even Catholic). I would go to that school for a biology class and then return to the Centre for the rest of the day. It worked so well that in grade 11 I attended four courses at the high school and went to the Centre for the afternoons. In grades 12 and 13, I took six courses and just went home for the remainder of the day.

My experiences in high school also had a considerable effect in improving my speech. I had to go to the worst school for wheelchair accessibility in Windsor. (It wouldn't be me if I went to a nice accessible school.) This school had four floors — we're talking stairs! I learned to enjoy this because I became popular with all the guys. The guys got the job of carrying me up and down these stairs. (I loved it!) And there were many times when they threatened to let me roll down by myself. Truthfully though, my days in a regular school have gotten me to where I am right now, university.

As I mentioned earlier, I'm currently beginning my second semester at the U of W. Due to the fact that I can't physically manage to attend classes on my own, I have two aides who go with me. These friends (they get angry when I call them aides because they're definitely good friends) get paid a small wage through the Student Affairs Office. I have one female and one male

Nola and friends at the ISAAC Convention, Boston, October 1984.

friend who take my notes, ask the profs any questions, and generally help me out (feeding, bathrooming, etc.). Since it is my first year, I'm not taking a full course load. I was able to get a bursary for disabled students (Ontario Bursary for Disabled Students). This bursary restricts the student to take 60 percent or less of a full course load. With these special arrangements of my friends and with the financial help of the bursary, I'm managing to have the thrills of being a university student. Next semester I think that I am going to apply for a grant and attend university full-time.

Whether or not a disabled individual is capable of a university education isn't important. The important thing is that the individual has the ability to communicate and to be somewhat independent. I love the craziness of U of W (and, yes, of Wednesdays) but I also realize that it was my parents helping me to communicate that has ultimately gotten me this far. The ability to express myself has given me independence. I thank the Lord for allowing me enough independence to be a student at the University of Windsor.□

Join ISAAC Now

The International Society for Augmentative and Alternative Communication (ISAAC) offers four types of memberships: (1) Student Membership (2) Active Membership (3) Contributing Membership (4) Corporate Membership.

Membership in ISAAC includes a subscription to *Communication Outlook* and the ISAAC *Bulletin.* As well, members are entitled to reduced rates for the *Augmentative and Alternative Communication Journal (AAC)* and *Communicating Together.*

For membership application and other information about ISAAC write: ISAAC, P.O. Box 1762, Station R, Toronto, Ontario, Canada M4G 4A3.

BCI Distributors

BCI publications and materials are available outside Canada from the following distributors:

In Australia
Ruth Walls Books Pty. Ltd.,
15 Roylston Street,
Box 282,
Paddington, N.S.W. 2021,
Australia.
Telephone: (02) 33 4982-331-3377

In Québec, Canada
(French Materials only)
Association du Paralysie
Cérébrale du Québec Inc.
Centre du Resource Bliss
525, Boul. Hamel est.,
Bureau A-50,
Québec, P.Q., Canada
G1M 2S8.
Telephone: (418) 529-5371

In the United Kingdom
Living and Learning,
Duke Street, Wisbech,
Cambs PE13 2A3, United Kingdom.
Telephone: (0945) 63441

In the United States
Don Johnston
Developmental Equipment,
981 Winnetka Terrace,
Lake Zurich, Illinois 60047, U.S.A.
Telephone: (312) 438-3476

EBSCO Curriculum Materials,
Box 1943,
Birmingham, Alabama 35202, U.S.A.
Telephone: (205) 991-6600
Toll Free 1-800-633-8623

Machines, Computers and Things

Blissymbolics and High Technology — a Challenge for the Instructor

by Thomas Franzkowiak

Thomas Franzkowiak.

Thomas Franzkowiak completed an internship program at the Blissymbolics Communication Institute this past summer. Thomas has a background in special education with emphasis on technology. He is presently teaching six Blissymbol users how to work with the Blissapple in Germany. He is also translating Blissymbols into German.

From the early days, augmentative communication has always been closely linked with rehabilitation engineering and the development of technology. Now in 1984, anybody who wants to become a teacher of severely physically handicapped students cannot do so without learning as much as possible about the aids and devices that are available today.

It is not enough anymore to learn how to teach a child the use of a system. Now one needs to know how technical aids may further improve communication skills and how any particular aid will enhance the already functional communication capabilities of the nonspeaking individual. The advent of high technology — especially the microcomputer — has the potential to increase the efficiency to interact remarkably.

On the other hand, the use of microcomputers also raises several questions that are worth being looked at carefully. I would like to examine some of the problem areas and potential benefits from the instructor's (teacher's/speech pathologist's/parent's/etc.) point of view.

Problem Areas

There is no doubt that the microcomputer can open up new doors for many nonspeaking individuals. However, advanced technology is not the cure of all communication problems. Teachers might erroneously say any of the following.

"Let's buy a microcomputer and communication problems will disappear."

Such a statement is quite common since many people overestimate what a computer can do for the handicapped individual. At a time when more and more high technology surrounds us, we easily fall into the trap of hoping that this will somehow solve all our problems.

For the teacher it is easy to place a student in front of a computer for part of the school day. But this is certainly not a way to improve his or her interaction skills. If s/he is left on his/her own for a long period of time, the contact between the nonspeaking individual and others may be even further reduced.

"Microcomputers have become so popular. It shouldn't be difficult to find out how they work."

While it is true that microcomputers are being produced for the mass market, i.e. for people who are not very familiar with high technology, it is still an overwhelming task for the instructor to learn how to use the computer effectively. In many cases, the jargon in hardware and software manuals requires more than just some basic technical knowledge. Often the manual does not explain what strategies are appropriate to solve problems that may occur while using the system.

Because the majority of instructors have little experience with computers and software, they often need to attend special workshops or training sessions to gain familiarity with the topic. However, training may not be available in many regions (and this is certainly the case in Germany right now). As a result, people end up having a potentially powerful tool without knowing how to apply it.

"Computers are nice toys to play with, but they are not appropriate or necessary for severely physically handicapped children."

This statement leads to the question: Who is going to pay for a computer, the interfaces, the software, and so on? Funding agencies often refuse to consider microcomputers as valid rehabilitation tools because they are so heavily used by hobbyists. I had a frustrating experience when I tried to get a computer for the ten to fifteen German students at the school where I wanted to conduct a study about the impact of using a microcomputer as a communication aid. Although the school has five brand new computers, the person who donated them was not willing to let any student with athetosis, visual impairment or mental retardation use his precious gifts, because "they would only ruin the machines". As a result, hardly

This section of *Communicating Together* is sponsored by Sun Life Assurance Company of Canada, Toronto, Ontario.

anybody is using the computers at this time.

"Computers will increase the gap between persons with disabilities and the rest of society."

The microcomputer has already begun to change many aspects of our daily life, and hopefully the microcomputer will also become more accessible to persons with disabilities. Nevertheless, the question must be asked: Who is going to get one and who is not?

Shworles (1983) questions the willingness of society to insure that all handicapped persons who could benefit from the new technologies will be provided with the devices they need. While typical children have their first experiences with microcomputers in school at a very young age, it could be that a cultural gap "may soon come about, that large numbers of persons with disabilities will find themselves in the truly handicapped and disadvantaged computer illiterate caste".

The microcomputer can only become useful for those who are in the lucky situation to get access to one. And that leads to another dilemma: If I introduce a student to the computer at school, does he not need to have one at home as well? Is it justifiable to work with several nonspeaking individuals, show them how much they may be capable of when given access to a computer and good programs, and then as soon as the project is over take away their writing, drawing or communication tool?

What Can be Done?

A. Kraat (1981) lists several reasons why electronic aids can play an effective role for the nonspeaking individual. She mentions, for instance:

- more independence in communication,
- written communication for educational, vocational and personal reasons,
- increase of the number of available language items,
- improved rate of communication,
- greater interaction with peers or persons who cannot read.

The microcomputer in particular has a lot to offer and can contribute to the success of the rehabilitation process, but only under certain conditions.

(1) The needs of the potential computer user have to be evaluated carefully in order to define the role of the symbols and the role of high technology. The long-term goals and the question of how the technical aid best fits into the person's total communication system must be considered. The next step is to obtain the most appropriate hardware and software. For example, a very complex device that cannot be accessed due to the lack of skilled experts or without the capability to display Blissymbols will not prove very useful for someone who communicates with Blissymbols.

(2) The developers of new microcomputers or programs for physically handicapped individuals should always keep in mind that the user and the people in his/her environment may not be experienced. It is therefore important to have accessible manuals that avoid jargon or to have training sessions that provide a lot of hands-on experience and information.

(3) Instructors should be willing to face the new technology and to learn about the options that already exist for nonspeaking individuals. This does not mean one has to become a computer programmer or know every single program that has been written for people with disabilities. But every instructor should actively seek sources that provide some basic information about the latest technology in the field.

(4) There should be more places that offer computer training, counseling, assessment and follow up. During the past two years, I have been able to see and appreciate what can be done if an excellent and committed staff provides these services, such as the Communication Aids and Systems Clinic/Trace Center in Madison, Wisconsin and the Augmentative Communication Service/Microcomputer Applications Programme in Toronto. However, these centres are quite exceptional.

(5) The training of future special educators and speech pathologists who will work with nonspeaking students is another area that deserves more attention. At this time, there are still not enough universities offering courses in augmentative communication. And, in those that exist, it is hardly possible to cover the technical aspects of the field in detail because there are so many other important topics that must be dealt with during the course.

(6) Once again, the lack of funds seems to be one major cause of the fact that high technology is presently not used in the most effective way. In a time of tight budgets, it is not easy to locate the funding that is needed to buy equipment and provide the services I have talked about.

Conclusion

To buy a microcomputer for a nonspeaking child does not automatically imply that his capability to interact with others improves. It is impossible to replace a system like Blissymbolics totally by a technical aid. One should not ask the question of choosing between Blissymbols or a microcomputer. Different situations can be better served by different communication systems. As well, electronic aids tend to break down once in a while, but the nonspeaking person always needs to have a reliable means of communication (such as a simple communication board).

The technical aid should be part of the overall plan and contribute to the communication progress of the individual. Hopefully technology will never become more important than the human being. □

References

- Kraat, A.W. "The Assessment/Selection of Augmentative Communication Systems — Part 2." In *Kommunikation För Gravt Talhandikappade*, Bromma, Sweden, Handikappinstitutet, 1981.
- Shworles, T.R. "The Person with Disability and the Benefits of the Microcomputer Revolution: To Have or to Have Not." *Rehabilitation Literature*, 44:11-12, 1983, pp. 322-330.

Augmentative Communication

Picture Your Blissymbols

by Anne Warrick

Anne Warrick is a Program Coordinator with the Blissymbolics Communication Institute. As a speech pathologist, she has been involved in the field of Augmentative Communication for many years. She is a Senior Presentor in Blissymbolics, and has travelled extensively presenting Elementary Workshops. Currently she is the Canadian Chairperson of the International Project on Communication Aids for the Speech Impaired (IPCAS).

The addition of graphic enhancements to demonstrate the meaning of specific Blissymbols has often been the spontaneous choice of instructors in their search for a way to meet the individual learning needs of their students. It is this interest in Blissymbol enhancements which have led to the Blissymbolics Communication Institute publication *Picture Your Blissymbols.*

For reasons of portability and availability, *Picture Your Blissymbols* has been packaged in a tote bag. The materials consist of a Stamp-Flashcard Book containing an initial vocabulary of 312 enhanced Blissymbols, and a corresponding set of unembellished Blissymbols. The accompanying *Instructional Manual* gives suggestions for introducing and teaching Blissymbols and for evaluating each student's communication potential. *Blissymbols for Use, A Supplement to Blissymbols for Use* and teaching support materials complete the kit.

Picture Your Blissymbols contains a functional vocabulary selected to meet the initial communication needs of the user at school, and in the workplace, home or residence. Vocabulary groupings relate to people, the body, hygiene, home and furnishings, nature, food and drink, clothing, locations, transportation and leisure. Active, descriptive, interactive and social vocabulary is also included.

The teaching approach described in *Picture Your Blissymbols* was designed for students who have the potential to use Blissymbols but require graphic enhancements to Blissymbols at an introductory stage, and who have little experience in the use of an augmentative communication system. It is also for the instructors, parents, caregivers and program assistants who choose, through the approach suggested in *Picture Your Blissymbols,* to support their students' cognitive and communicative growth.

The rationale for enhancing Blissymbols is based on two instructional objectives: to facilitate the learning of the meaning of a symbol and to support the gradual understanding of the system's capabilities. Enhancements can be added in several ways depending on the type of Blissymbol, the feature being emphasized and the purpose of the illustration. Only one example of each embellishment is provided in the Stamp-Flashcard Book.

Embellishments are drawn in pink. Pictographic Blissymbols are those which can be immediately recognized and require little, if any, enhancing.

flower

house

Blissymbols which present meaning of a less concrete nature have additional graphic features identifying that meaning.

(to) think

In *Picture Your Blissymbols,* animated figures embellish all person-related Blissymbols and through their postures demonstrate the concepts of self and others.

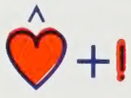
I/Me

They, Them

Some Blissymbols for the descriptive words of our language require embellishments which demonstrate the manner in which they represent meaning. For example, happiness and sadness can be seen from facial expression. Thus the heart in these symbols is embellished accordingly. When "feeling" is unrelated to either happiness or sadness, this more abstract meaning is shown by a heart of solid colour.

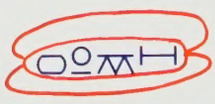
happy

(to) like



In some instances, the vocabulary items in *Picture Your Blissymbols* may be compound, that is the symbol components are sequenced meaning elements. For initial learning of these symbols, an illustration has been superimposed over the entire symbol, and no attempt has been made to illustrate any one of the components.

hot dog



Through *Picture Your Blissymbols,* instructors are encouraged to meet students' needs and interests by personalizing each symbol illustration, thus making it more specific. For example the symbol for animal could not only be personalized by the addition of a dog's head, but in addition students could relate to their family dog if its breed was identifiable by the symbol enhancement. Further instructional and illustrative ideas can be seen on the "Blissymbol Talk" page of this magazine, where enhancements have been added to the new group of animal symbols recently included in the BCI Standard Vocabulary.

Beyond the learning of individual Blissymbols is the need to encourage their use as an augmentative communication system. It is hoped that all those who are close to the Blissymbol user will recognize the importance of communication in formal, informal and leisure experiences. The Instructional Manual included with *Picture Your Blissymbols* provides suggestions relating to teaching, program development and the facilitation of conversational skills. These guidelines relate to Demonstration Instructional Modules which describe numerous learning experiences, and provide ideas for continuing program development. The Instructional Modules also encourage the development and construction of communication displays within a "teaching through communication" approach. An individual flashcard may become one unit of a mini display at the end of an exciting circle time or shopping spree.

The eventual need for a communication display of average size and content will challenge instructors to help their students transfer from the embellished to unembellished Blissymbols, and then to a reduced size. Reduction of the intensity of the enhancements, elimination of individual component parts of additional graphics or the temporary pairing of embellished with plain symbols are all possible methods. Instructors are encouraged to identify and use those techniques which are most suited to their students. Blissymbol size reduction is handled through the introduction of BCI support materials: the Core Vocabulary and Display Stamps.

We know that many Blissymbol instructors have much to add to our starting point — the first edition of *Picture Your Blissymbols.* Should you choose this approach, we hope that you will send us accounts of your successful and difficult experiences. We hope that you enjoy this way of teaching. We know that by beginning augmentative communication with Blissymbolics, your students will gain experience within a system that can serve them well, either as their lifetime communication system, or until they become fluent in traditional orthography.□

** ** **

System Familiarity: A Survey of Professionals

by Caroline Ramsey Musselwhite and Patricia B. Porter

Caroline Ramsey Musselwhite has a doctorate in speech-language pathology with a minor in special education. She currently provides direct services to severely disabled children at the Irene Wortham Center in Asheville, North Carolina. She also provides consultative services and lectures in the United States and Canada.

Patricia B. Porter, Ph.D. is Chief of the Communicative Disorders Section of the Division for Disorders of Development and Learning, and Assistant Professor, Division of Speech and Hearing Sciences of the School of Medicine, University of North Carolina at Chapel Hill. Dr. Porter has been involved in the area of augmentative communication since 1974.

One aspect of successful augmentative communication is a good match between the nonspeaker and the communication system. In order to make the best possible match, it is important that professionals, parents and users involved in decision-making be aware of the variety of graphic symbols and signs available to nonspeakers.

This article is based on the results of a survey on the familiarity of professionals with various communication systems used by nonspeaking people. A total of 18 different communication systems were included. These systems were those mentioned frequently in the literature on nonspeech communication and/or have been investigated in research projects. Ten represented gestural or unaided communication systems which do not require any physical aids; examples are Amer-Ind and Signed English. Eight graphic symbolic or aided communication systems were also explored. These refer to techniques in which some type of physical object or device is used, such as Blissymbolics or Picsyms.

System familiarity survey forms were prepared to get background information, such as occupation and education, for each participant. The names of all 18 systems were shown alphabetically, and participants were asked to rate their familiarity with each system by using the following rating scale:

1 = Not at all familiar with it.
2 = Familiar with name; don't really know the system.
3 = Somewhat exposed to the system.
4 = Understand the major features of the system.
5 = Understand and feel competent using the system.

Because nonspeech communication is an emerging field, a number of inservice workshops are available to provide professionals with information they may not have received during preservice training. The survey form results reported here were based on forms filled out at three separate conferences on nonspeech communication. Each group will be represented by a name indicating the location and year of the conference.

- North Dakota, 1982 (ND-82): A four-day workshop in Grand Forks, North Dakota, sponsored by the University of North Dakota, with two speakers (Caroline Ramsey Musselwhite and Karen St. Louis).

- North Carolina, 1982 (NC-82): A two-day workshop in Asheville, North Carolina, sponsored by

Western Carolina University and Mountain Area Health Education Center, with two speakers (David Yoder and Jon Miller).

- North Carolina, 1984 (NC-84): A one-day conference in Raleigh, North Carolina, sponsored by the North Carolina Augmentative Association, with one speaker (David Yoder).

The participants in all three groups were primarily speech-language pathologists and special educators, with speech-language pathologists forming at least two-thirds of each sample. It should be noted that, although people from a variety of disciplines were invited to each workshop, all presenters were speech-language pathologists. The two North Carolina groups were three-quarters masters level or above, while the North Dakota group reflected a 50-50 split between bachelor and masters or higher educational levels.

General Summary of Findings

Rating scores for all three groups on the various communication systems were tabulated. The most striking aspect is the relatively low familiarity scores for most systems across all three groups. Based on the rating scale, a rating of 3 (somewhat exposed to the system) would seem to be a very minimal score for making an informed decision about each system. However, only one unaided system (American Sign Language) and one aided system (Blissymbolics) reached that level across all three groups. Two additional unaided systems (fingerspelling and Signing Exact English) and one additional aided system (Rebus) approached an average score of 3.0 for the three groups. Thus, it would seem that, for these samples, more exposure to nonspeech communication systems is needed if professionals are to successfully participate in system selection.

A second trend noted is the general correspondence among the three samples in the ordering of systems. For example, the most familiar unaided systems for all three groups were: American Sign Language, fingerspelling, Signed English, and Signing Exact English. The Duffy System (now called DuffySign) and Paget-Gormam Systematic Sign are the least familiar of the unaided systems for all three groups.

Some correspondence was noticed for aided systems also. The two most familiar systems were Blissymbolics and Rebus, while the least familiar across all three groups was Yerkish Lexigrams.

Regional Trends

While average differences were small, the exceptions to the trends noted earlier may be informative. For example, both Cued Speech and Signed English were developed at Gallaudet College in Washington, D.C. Both North Carolina groups rated themselves at least one-half point higher on these two systems than did the North Dakota group. Similarly, Picsyms was developed in Nebraska and PIC in Saskatchewan, Canada, both areas closer to North Dakota than to North Carolina. Perhaps this accounts for the greater discrepancy in scores on these two systems than on other aided systems.

The suggestion here is that we may be more familiar with systems that are developed closer to home. Since a great deal of information on nonspeech communication seems to be shared through workshops, it would make sense that we have greater access to information developed and/or presented by speakers who are geographically closest to us.

Time Trends

It is also interesting to consider the possible trends in system familiarity across a time span of nearly two years. The NC-82 and NC-84 workshops are similar in terms of location, speaker, occupation and educational levels of participants. The 1984 group had more experience practicing and had worked with more nonspeaking students. With one minor exception, Braille, the NC-84 group rated themselves higher than did the NC-82 group. This difference was at least half a point for three unaided systems (Amer-Ind, Signed English and Signing Exact English) and for one aided system (Premack-type tokens). Overall, however, increases were small, suggesting that information dissemination may be occurring slowly.

Summary and Implications

Clearly, this information must be interpreted cautiously, because it does not represent a random sampling of professionals working with nonspeakers. However, it does represent professionals who chose to attend workshops on nonspeech communication, and most participants had already had experience working with nonspeakers. Therefore, it seems that these samples represent professionals who should have a high degree of familiarity with a variety of communication systems, in order to assist in appropriate decision-making. It is a concern that a system such as Blissymbolics, which has extensive informational support from the Blissymbolics Communication Institute, is not highly familiar to these workers in the field of nonspeech communication.

The original system familiarity survey (NC-82) was completed as a needs assessment for the Mountain Area Health Education Center in Asheville, North Carolina. Based on the results of that survey, additional lectures of the topic were offered to area professionals. Perhaps similar needs assessments can be carried out in other areas. Then organizations that sponsor workshops, such as universities, advocacy groups and health education centers, can be made aware of the need for continued dissemination of information on the topic of communication systems available for use by nonspeakers. □

Editor's Note:
For further information on the nonspeech communication systems included in this survey, please see: Musselwhite, C.R., and K.W. St. Louis, *Communication Programming for the Severely Handicapped: Vocal and Non-Vocal Strategies,* College-Hill Press, Houston, Texas, 1982.

Mary is using optical headpointer to select special messages on the LIGHT TALKER to talk with her friends.

Let's Talk...

We have a lot to say and we have the means to do it.

For people unable to speak, LIGHT TALKER (as seen in photo) and TOUCH TALKER make conversation possible. These two new speech output communication aids are:

- totally user programmable
- small
- keyboard operated (TOUCH TALKER); optical headpointer, single/multi-switch scanning, morse code (LIGHT TALKER)
- available with MINSPEAK™ or EXPRESS software
- flexible to meet changing user needs
- available with connections for computer, printer or environmental control

Interaction, meaningful conversation, and expression: these are the goals of a truly effective system. Please call us or your nearest Certified PRC Consultant. We have a lot to tell you about these two systems.

PRC

Prentke Romich Company
1022 Heyl Road • Wooster, Ohio 44691
Phone (216) 262-1984

BETACOM
6160 VanDen Abeele • St. Laurent, Quebec H4S 1R9
Phone (514) 335-1058

WP 7

Family and Community

Time Marches On

by Andrew and Mark

Andrew Murphy of Toronto has been communicating with Blissymbols for several years. In this column, appearing in each issue, Andrew and his father Mark share their experiences and those of other families with the special perspective of people who communicate in different ways.

I have been using Blissymbols for nearly ten years now and have noticed many changes during those years. The symbol system itself has developed significantly so that it can now allow users to express themselves with more sophisticated language. There are more teachers teaching Blissymbols to nonverbal people and the community in general is much more aware of Blissymbols, what they mean and how they are used. Only a few years ago, people did not understand Blissymbols and they didn't want to take the time to figure out how to communicate with a Blissymbol user. Now I find that more and more people are showing an interest in learning how to communicate with me directly rather than through my parents. This gives me a great feeling and is allowing me to develop new relationships.

The first users of Blissymbols are maturing and moving through the school system. It seems the same people continue to break new frontiers. One of these people is my friend Ann Running. She and I went to school together at OCCC and then at Sunnyview and just this year Ann started high school at Lakeview. It was a whole new experience for her. In September, I will join her there. It makes it easier for me since Ann has been there already.

Another first for Ann will occur shortly when she moves into a group home. She is very excited about it and I am anxious that it is a good experience for her since I expect that I will be moving into such a home in a few years. Ann and I, along with Liam, another friend, keep in touch by sending computer letters to each other and we also are working with the same tutor, Cathy Fairley, to help us develop our language skills. Cathy has us each writing stories and sharing our ideas with each other. I work with Cathy every week and she is helping me to express my own ideas.

Ann spends a great deal of time with the computer and finds it "really super". She is using the "Big Talk and Type" program and finds that she is really improving her spelling through use of the computer.

We were able to get in touch with Carol Sue Mennary to find out how she is progressing with the computer. Her family has been able to get a university student to help her with her homework. Unfortunately, her new wheelchair doesn't fit the computer table and they will have to make some adjustments. Since her school doesn't have the same equipment as she has, she can't use her programs at school. She also finds that being in Owen Sound, which is far from Toronto, makes it difficult to get help with the computer when it's needed. She hopes that with time these problems will be solved.

** ** **

Everyone else in my family skis and I have found it frustrating since I wasn't able to join them. I communicated this feeling to one of my "special friends" and much to my surprise, she arranged for me to go skiing on my birthday. She got in touch with the people who operate Earl Bales Park in North York and arranged for the ski instructors to take me up and down the hill on the ski patrol toboggan. It was a terrific experience and a real thrill. I also met some new friends and was able to thank them personally by sending them letters that I typed on my computer. Once again, being able to communicate my feelings helped eliminate my frustration and allowed me to do something that I had wanted to do for a long time.□

Editor's Note:
Interested readers please write to Andrew Murphy, 29 Kellythorne Drive, Don Mills, Ontario, Canada M3A 2L5.

Parent Involvement in Augmentative Communication Programs:

Summary of an ISAAC Round Table Discussion

The following article is the result of one of the 23 Round Table Discussions which were held at the 1984 ISAAC Conference in Boston. This Round Table Discussion group met to consider ways to involve families and caregivers in augmentative communication programs. Lynnette Norris was the facilitator for this discussion group.

Our first issue was the need for home carry-over with the development and use of the child's communication system. Many parents become involved once they see the benefits of an organized system. Early parental involvement could relieve the teacher from the logistic demands of keeping a large number of communication trays up-to-date. This could be achieved by asking parents to work with small specific goals (e.g., keeping track of the need for new symbols on a tray). Many parents want real involvement with their child's progress, and not to be just "peelers and stickers". These parents may see the communication interaction between the professional and their child and desire similar results.

It was felt by the members of the group that getting the parents familiarized with the assessment process, and giving training to help parents recognize how communicative interaction is established and developed would be of assistance. It was emphasized that parents should be encouraged to interact with their child in a wide variety of ways (e.g., reading stories, sing-a-longs, talking socially).

A number of participants brought up the problem of what to do when parents reject organized communication systems for their child, because they feel they can anticipate and interpret their child's needs through "private" systems of communication (e.g., vocalizations or idiosyncratic gestures). Parents should be reminded that they may not always be there, and that someday their child may be forced to communicate with the outside world. Videotapes of children successfully using the system at school would demonstrate the benefit of this.

The need to recognize the feelings of parents was stressed throughout this discussion. It was noted that parents need empathy and understanding from the professionals working with their child. When parents first meet with professionals regarding their child, they are often going through a "time of crisis" and looking for "structure" in their lives. This may result in their desire to give total decision-making power to professionals. Parents who are more experienced with the assessment process may also have been exposed to so many alternatives with regards to communication systems that they relinquish all responsibility to the teacher. A situation like this can be approached by developing the trust of the parent. This may involve being more accepting of the parents' differing priorities (e.g., walking being the predominant concern of the parents rather than communication at this time).

A more trusting atmosphere can also be developed by helping parents create support groups. It was noted that holding the meetings on "neutral ground" might be helpful in building the confidence of parents. A student written newsletter, informing parents of class activities, individual successes, new vocabulary, etc., can create an informal, non-threatening alternative to meetings. Parents may also enjoy meeting as a group to learn a skill, such as switchmaking. This gives the parents a chance to move beyond the usual focus of parent/professional meetings.

The importance of considering the total environment in assessment procedures was discussed. One participant explained how in his community the visiting parents and child being assessed actually stay at the homes of the professionals and other parents while the assessment is underway. This allows the professional to see the child in a number of situations. It was noted that if this wasn't possible, then the professional might ask for a videotape of the child involved with various communication activities, which could then be used as part of the child's overall assessment.

The usefulness of siblings in the promotion of classroom conversation was also discussed. Tape recordings from home and holiday parties with the whole family were a few of the strategies explored.

The group also discussed the need for the "communication block" on children's displays (a short message outlining how the child communicates, as well as his likes and dislikes). The necessity of flexibility and updating was noted. Putting a "riddle of the week" on the child's display (which the child could answer using his system) could encourage interaction from both familiar and unfamiliar caregivers.

It is important to emphasize that assessment is an ongoing process, and that the system selected now is not forever. It may be important to tell some parents that speech "hasn't been given up on". An open sharing atmosphere can be developed by photocopying articles and exchanging them with parents. Parents may be more open to new ideas when reading and relaxing at home. Some also suggested that videotaped instruction on sign language could be loaned to parents. Videotapes could also be useful in showing how the communication system was used both by the child and by others.□

Editor's Note:
The following books were offered as being helpful in working with families:
Sign Language Fun, Sesame Street, Children's Television Workshop, Random House, Toronto, Ont. 1980.
Like Me, Behavioural Education Projects, Inc. Read House, Harvard University, Cambridge, Mass. 02138.

This section of *Communicating Together* is sponsored by Pilot Club International, Ontario District.

Perspective

An Interview with George Karlan, Part 2:

Research in Communication Intervention

by Shirley McNaughton

George Karlan is an associate professor of special education at Purdue University. He received a Ph.D. in child development and psychology in 1976 and since that time has been in special education.

The first part of this interview appeared in the last issue of Communicating Together.

Communicating Together:
Do you see current research in augmentative communication leading into supporting, helping communication intervention? What kind of help are we getting from research and where do you see the need in research for creating better intervention?

Mr. Karlan:
The augmentative communication field is really a field where clinical practice is more advanced than basic research. Only recently has augmentative communication become an accepted academic discipline. Techniques are being used by people in the field on which we're just starting our research. One might ask, "Why do the research if people are already doing it?" We hope that in the long run the research will help us to better understand what we're doing, to fine-tune things to the individuals and especially to organize the knowledge so that it is more easily conveyed to new people in the field.

We at Purdue are best known for our research in the area of iconicity or the representativeness of symbol systems. (Iconicity refers to how apparent the relationship between a symbol and its meaning is to learners.) There is information within symbols, whether they're manual or graphic, that can be used by individuals to help them in learning to use the symbol. In our research we have advanced from a stage where people have different ideas about what iconicity is to a stage where we at least have general agreement on how to define iconicity.

We are studying what sort of enhancement context gives to iconicity. How does the setting as a context, the place where the symbol is used, help the person to understand or to use the symbol? What about other symbols as a context? If you put two symbols together, does the fact that you have a two symbol utterance make any difference to iconicity, as opposed to a single symbol which occurs in isolation?

The next thing we need to learn is what is the basis for the iconicity. What kinds of information are represented in those symbols which have a high degree of iconicity, i.e. those that are transparent? How do we utilize this information in designing a program for a severely handicapped individual? There's a group of manual signs, for example, in which the sign looks like the action. Can we enhance learning by putting an object into our hands as we perform the manual sign, and then do it again without the object being present? This might have some effect on how we introduce signs.

In the manual signing area we are doing more research on motor components, the production characteristics of manual signs. Along a similar vein, we probably need some more research on the complexity of symbols. How does visual complexity make a difference? Are symbols which superimpose information one atop another more difficult than symbols or systems which sequence bits of information that are next to each other? Those, I think, are some of the areas that should be investigated.

Communicating Together:
What kind of advice would you give to people not in the research area, who are looking to research for help in improving their instruction program? What would be your advice to them in evaluating research?

George Karlan.

Mr. Karlan:
One piece of important advice is to be cautious in over-interpreting or over-extending data that appears in a research publication. You must look at the kind of individual with whom the research was done. You must be cautious about applying that to other individuals that are different. For example, what might be determined for a child who is severely physically handicapped but appears cognitively and socially "normal" may not apply to a severely retarded individual. What we know of the learning style of truly autistic children is that they appear to attend more to visual stimuli than to auditory stimuli. It might be a danger to take that same idea and apply it to a severely retarded child who is not autistic because they may not have the same stimulus over selectivity.

Communicating Together:
What would you hope for from research in the future?

Mr. Karlan:
I would like to see basically applied research continue. Basically applied research is research which still asks some of the more fundamental questions but always with an eye toward the applied issues.

Some people have argued that there is no such thing as clinical research because the emphasis must be on the individual. The constraint of a clinical practice makes certain kinds of individual questions nonresearchable. Others take a strictly fundamental approach to visual discrimination skills with respect to aided symbols. I am not sure that either of these attitudes is very helpful. On the one hand, the purely clinical research builds a set of case histories that help to determine which techniques work and which don't. What they should also be doing is helping us to look at the characteristics of the individuals who were involved in the clinical case histories and say: "Does that apply to others with those same characteristics?"

I think one thing that we need to have in the augmentative communication field is a standard by which we are able to communicate to clinicians or other researchers what the individual was like that was involved in the research. Not just on the basis of I.Q. or their receptive language age, but on the basis of their social behaviour and their communicative behaviour. The more information we have about the individuals, the easier it will be to draw the generalities. The challenge here is finding a standard way to profile the nonspeaker that others will understand.

It is difficult to develop a clinical data base for the augmentative communication field. There are quite a variety of people who are nonspeakers. There are those people who have been nonspeaking since birth; there are people who were speakers but lost their ability to speak through degenerative nerve disorders. There are autistic individuals and mentally retarded individuals. It is a rather monumental task and maybe what we need to do is to break it up into some subtasks. Ultimately one of the things that will help our field is if there is some way that we can develop a profile of the nonspeaking individual so that when we find a successful augmentative technique, we know with what kinds of individuals that technique will work.

Communicating Together:
Do you think there's a place for longitudinal study?

Mr. Karlan:
There is one research area in which I would really like to see some longitudinal studies. That is the area of deciding who is a candidate for augmentative communication and then of evaluating skills needed for developing an augmentative communication system. I think we really need some longitudinal studies to tell us whether certain assumptions we've had are true or not. Longitudinal studies may also tell us why augmentative systems have worked with some individuals and not with others. We know, for example, that follow-up is crucially important to successful augmentative communication use. But what kinds of follow-up, or what kinds of effects do changing life circumstances have on augmentative communication systems?

As an example, when the mentally retarded individual goes from an elementary school program to a junior high school or high school oriented program, there's usually much more of an emphasis on community skills, vocational skills, community mobility, and independence. What does that do to the kind of augmentative system that had been designed for the individual? Is there a need to change or to add to the system? I think these are things that we really need longitudinal studies to help us with.

Communicating Together:
Would you like to say something about technology?

Mr. Karlan:
One has to be a bit of a jack of all trades in the augmentative communication area. It's not enough anymore to just know something about communication. You also need to know a little about computers and a little about adapting toys and a little about switches. I think we're at a place, though, where we need to begin to apply technology to those with more severe developmental delays. I would like to see technology that can be used to educate the severely multiply handicapped individual.

Our first challenge in applying technology was to come up with programs and systems that only required a single response or two responses. Now I think we've achieved that goal. We have things like the adapted firmware card which helps us to modify commercial software to use with a variety of limited input.

Now I would like to see more software that needs no explanation as well as only requiring one or two responses, such as video games for the sensorimotor level child. I think there has been a reluctance to utilize some of the technology we have with severely retarded individuals in schools because of the cost. What is the cost of bringing in a computer and setting up adaptive firmware cards and special switches with a child, for example, who is not a fast learner, who may this year learn only one or two or three symbols to use in some limited communicative context? How could we use some technology to help that individual, especially if they're multiply handicapped? Those are big questions.

Communicating Together:
What kind of technology do you see being applied for communication?

Mr. Karlan:
As the cost of voice synthesis goes down, I think we can explore some fascinating areas. For example, we can now provide an individual with a portable microcomputer based voice synthesis system for half the cost it used to be. For example, the Epson computer now has the voice module on it. If that were fixed up with an expanded keyboard on which pictures or symbols of some type could be placed, how much faster the individual's acquisition of the productive use of the symbol might be if every time s/he pressed one of the symbols, it spoke. The unit vocalizes and so it might attract attention plus it transmits the message that individual wants all at the same time. I hope the

This section of *Communicating Together* is sponsored by the Tippet Foundation, Toronto, Ontario.

costs are down enough now that we can start looking much more at the impact of voice synthesis technology on the more severely retarded individual.

Communicating Together:
What do you think will be the issues in augmentative communication five years from now?

Mr. Karlan:
Let me give my response in the form of what I hope we're not looking at. I hope we're not looking at making decisions about who is the best candidate for augmentative communication techniques because we only have a small amount of resources available. I hope in five years we will be talking about those bad old days when we didn't know what we were doing. I hope that we'll continue over the next five years to make the same kind of rapid progress we have over the last five to ten years.□

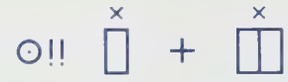
** ** **

Severe Disabilities Network Directory

A directory of individuals working with clients with severe and multiple disabilities throughout Canada is currently in preparation at the University of Alberta. It is designed to facilitate communication between people with similar concerns and interests. If you are a Canadian working with clients with severe or multiple disabilities as a communication therapist, teacher, occupational or physical therapist, aide, administrator or in any other capacity and would like to be listed in this directory, please contact: Directory, Dick Sobsey, Associate Professor, Educational Psychology, 6-102 Education North, University of Alberta, Edmonton, Alberta T6G 2G5.

A form will be sent for you to supply us with listing information. There is no charge for being listed.

Publication Announcements



Publications from IPCAS

The International Projects on Communication Aids for the Speech Impaired (IPCAS) has recently announced the availability of the following three publications.

Conversations with Nonspeaking People

Conversations with Nonspeaking People is a series of biographical and autobiographical accounts about living with speech impairment. The challenges these individuals have faced in social and vocational situations and the solutions they have found are revealed with humour, insight and sensitivity.

Technical aids, computers and communication systems are considered as they have been applied to specific problems encountered by fifteen people from Canada, Sweden, the United Kingdom and the United States.

As one of the participants, Michael Williams, says: "...the power of a person comes from his or her ability to manipulate language." Most importantly, he continues, "Everyone has something to say." *Conversations with Non-Speaking People* illustrates this beyond a doubt.

Paperback 6 x 9 63 pages
ISBN 0-86500-017-4
1984 $4.50

Communication Interaction Between Aid Users and Natural Speakers: An IPCAS Study Report

This IPCAS Study Report by Arlene W. Kraat provides a current state-of-the-art view of what is known and thought about communication interaction between physically disabled persons using communication aids and others in everyday environments. It is a compilation of published research, unpublished works, clinical observations and the perspectives of a variety of aid users and professionals in the United Kingdom.

Teachers, therapists, researchers, aid developers and consumers will find a knowledge base from which future research and clinical efforts can be built.

Jonathan, Too, Goes to Day Nursery

Written by Anne Stiernquist and published in both English and Swedish, this book tells the story of the integration of a child with cerebral palsy in a pre-primary school in Sweden. *Jonathan, Too, Goes to Day Nursery* is a delightful book which speaks through photographs as effectively as through the printed word. It will interest anyone who works with children or has a handicapped child in the family.

Paperback 5½ x 8½ 62 pages
ISBN 91-27-01101-1
1981 $4.50

For further information and to order above books, contact:
IPCAS Secretariat, Suite 2110,
One Yonge Street, Toronto, Ontario,
Canada, M5E 1E5.
Telephone: (416) 862-0340.

** ** **

Beyond the End of Your Nose

"Beyond the End of Your Nose" is a new play by Patricia Henderson and Julie Salverson about tolerance and acceptance. It is a special story about children learning to see the person beneath the disability. "Beyond the End of Your Nose" was commissioned by the Canadian Association for the Mentally Retarded, Winnipeg and was first produced by Prairie Theatre Exchange in October 1983. The show

was also given a special performance at the National Conference of the Canadian Association of the Mentally Retarded on October 28, 1983. The story of this first production was featured in *Communicating Together,* Volume 2, No. 2.

The authors, Patricia Henderson and Julie Salverson, have been involved in theatre as playwrights, drama workshop leaders and stage managers.

In February 1985, the play was published by and is available from: Playwrights Union of Canada, 8 York Street, 6th Floor, Toronto, Ontario, Canada M5J 1R2.

Paperback 5⅓ x 8½ 57 pages
ISBN 0-88754-379-0
1985 $4.95

The Communicative Interaction Patterns of Young Nonspeaking Physically Disabled Children and their Primary Caregivers

This study by Janice Light analyzes the communicative interaction patterns of eight congenitally nonspeaking physically disabled children (between the ages of four and six years) and their primary caregivers. Results are reported with respect to the discourse status, communicative functions and modes of communication for children and caregivers. Implications for clinical intervention and directions for future research are also presented.

Published and Distributed by: Blissymbolics Communication Institute, 350 Rumsey Road, Toronto, Ontario, Canada M4G 1R8.

Soft cover, Cirlox bound 198 pages
ISBN 0-9690516-7-0
1985 $20.00

The Communication and Telecommunication Needs of the Cerebral Palsied Population in Canada

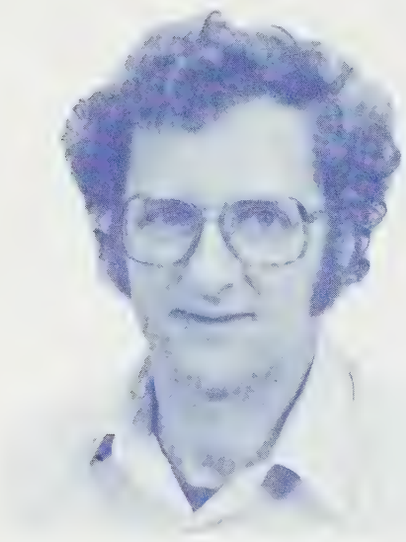
Jane Green is Project Researcher and Barbara Hopkins is Director of the Diagnostic and Remedial Unit, Faculty of Education, Memorial University of Newfoundland. Last year they undertook an extensive study for the federal government of the communication and telecommunication needs of Canadians with cerebral palsy. Mrs. Green travelled across Canada conducting interviews and collecting information. They then compiled an extensive report based on her findings.

The report is now available from: The Department of Communications, Broadcasting and Social Policy Branch, Journal Tower North, 300 Slater Street, Ottawa, Canada K1A 0C8.
Telephone: (613) 995-9943

Research and Publications

Research at HMMC

by Geb Verburg



"Research and Publications" is written by Geb Verburg, who has been involved in the field of nonspeech communication since the mid-seventies. A cognitive scientist, Mr. Verburg is currently working as Research Associate in several research projects at the Hugh MacMillan Medical Centre (formerly Ontario Crippled Children's Centre) investigating the use of microcomputers, the development of software and assessment tools for control and mobility.

Those of you who have visited the Blissymbolics Communication Institute "head office" in Toronto will know that BCI lives in the same building as the Hugh MacMillan Medical Centre, formerly Ontario Crippled Children's Centre. The Centre is a pediatric rehabilitation facility that includes a hospital, a school, a large rehabilitation engineering department (RED) and a full spectrum of clinical service departments of which Augmentative Communication Service (ACS) is currently the fastest growing department. Last year the Research Department was created as an umbrella and organizational catalyst of all research and development that occurs in the different departments. Not surprisingly a good proportion of all research conducted at the Centre relates directly to different aspects of Augmentative Communication.

Clinical Technology

Under this heading, I would like to discuss the "Prism Tray" project (Principal Investigators: M. Milner, P. Parnes; Contact Person: N. Rothschild) and the "Talk-o" project (Principal Investigators: M. Milner, P. Parnes; Contact Persons: N. Rothschild, W. Literowich). Both projects are instances of a clinician's invention for which a technical solution was provided through the cooperation of RED and ACS. The Prism Tray is a device created to increase the tray surface to allow more symbols to be displayed and accessed, avoiding the need for auxiliary trays, or books. It consists of a flat box in which three triangular ("prism") bars are mounted horizontally so that one of the three sides faces up. Symbol stamps or other stimulus items can be mounted on all three sides of the prisms. Activation of a single switch turns the prisms over to the next face.

The effect of the three-sided bars mounted over the full width of the wheelchair tray is to increase the number of items available to the person at all times. One of the early outcomes of this study is the users' satisfaction with the greater independence that results when an auxiliary tray is not required. During the evaluation of the Prism Tray, a number of other possibilities arose, such as a new organization of symbols or items, differential spacing and repetition of a symbol on more than one face.

Talk-o is the name given to a speech output device under development by Rabindra Nauth and Walter Literowich upon instigation of Nora Rothschild and Margarit Beesley. Talk-o's speech is of extremely high quality and comparable to live voice recorded on a high quality tape recorder. The purpose of the device is primarily for quick messaging and social interaction. Intended to produce a small high quality vocabulary of about 20 messages in any type of voice (female, male, child, adult, English, French, etc.), the device uses a technique in which a target voice can speak messages into a microphone. The messages are digitized and stored and can be called up and resynthesized to sound almost exactly as first spoken. Access to Talk-o's messages will be through direct selection or by means of a single switch or joystick or multiple switches. The vocabulary will be reconfigurable.

Although both of these projects are still in a development and testing stage, they are testimony to an interdisciplinary approach in which clinical needs and ideas sire low or high technological solutions.

Accessing and Logo

The team that developed the single switch assessment system (M. Milner, P. Parnes, S. McNaughton, W. Lotto; Contact Persons: F. Shein, K. Lee) have been working hard on the next generation of switch assessment tools. MICAS, the Multiple Input Control Assessment System (M. Milner, P. Parnes, W. Lotto) will allow for the assessment of single switches, two switches, three switches and five switches each with a number of alternative selection options (e.g., autoscan, direct selection, slow or fast scan). The exploratory development for this system was carried out with the help of 14 severely disabled youngsters who used a variety of input methods while learning and working with LOGO.

LOGO was made available via commands written in Blissymbols and accessed by means of one, two, three or five switch scanning or selection procedures. All subjects were severely physically disabled; eight were nonspeaking.

Since their disability had prohibited these persons from engaging in any graphic expressive form, we were not sure whether they would be able to make a drawing once presented with the means to do so. To

our surprise and their exhilaration, all subjects did produce spontaneous drawings after one to two months (sometimes as little as one week) of highly structured training. Christmas trees, cars, houses, a St. Bernard dog, spectacles and a comb were among the items drawn on the screen. Once LOGO was sufficiently mastered, alternate access methods were put in place to evaluate the gain or loss in efficiency that accrued from an increase in the number of switches and changes in the scanning and selection method. The final report for this project will be available this fall.

Blissymbolics and Multiply Disabled Persons

In 1982, work was started on a project to empirically determine how Blissymbols should be changed to make them more readily usable by multiply disabled and or low functioning persons. A research proposal was written to determine firstly whether the visual perceptual nature of Blissymbols was an obstacle and secondly to explore how by simplification and/or embellishments the symbols could be made more transparent. As happens with some research proposals, this ambitious proposal failed to find a sponsor and only the first part, the study of the visual perceptual aspects, was funded. The most interesting part, i.e. simplification and embellishment of symbols, was not funded in this earlier empirical venture, but has now found a place among the Bliss materials in the form of the *Picture Your Blissymbols* (PYB) system. A footnote to the history of PYB: while it was originally planned to be an empirically based system (i.e. all symbol modifications were to be tested experimentally with groups of low functioning subjects.), the current PYB system was created in a much faster and, I believe, more responsive way by using expert panel workshops combining input from clinicians, system experts and theoreticians.

Visual Perceptual Matching

The research of the visual perceptual prerequisites for Blissymbolics took the form of a visual matching task. In the first study, two forms of visual matching tests (matching to sample and paired comparison) were implemented in a computer-based test format (Conn Smythe project, S. McNaughton, M. Milner, J. Staub, 1982).

Some reasons for choosing a computer assisted assessment format rather than more traditional methods were the motivating value of computer based methods and the computer's potential to minimize the physical demands placed on the person.

While developing and pilot testing the two computerized versions (a passive and an active version) of the Perceptual Matching Task (PMT), a question kept nagging at the back of our heads. Would these computerized versions be as effective as, for example, brightly coloured cut-outs or multi-sensory appealing ("cuddly") stimuli. We noticed that the students touched the screen and followed the movement of shapes on the screen with their eyes and occasionally with their fingers or hand. We also found children playing with the switches, either just pressing the switch for its own sake or unplugging it and plugging it in again. In spite of this interest and attention displayed by the students, we also noticed that some subjects could not easily make the connection between the activation of the switch and the movement of a shape as a consequence of this activation. Once this connection was discovered, it was often broken as attention was drawn to other aspects of the computer screen, of the switch or of the experimental context.

Computer versus Manual Methods

The literature on traditional versus computer based assessments holds that the two methods are at least equivalent (e.g., J.G. Beaumont, 1982). However most studies are based on computerized versions of "paper and pencil" tests administered to able-bodied children and adults. Ours was a "performance" test to be administered to low functioning and/or physically disabled youngsters.

We decided to conduct a study that compared the performance of 24 mentally retarded and mild to moderately physically disabled students on the two computerized versions and a manual version of the PMT.

The results of this study (J. Staub, H. O'Beirne and S. McNaughton, 1985) strongly indicate that the three versions tested (i.e. Passive, Active and Manual PMT) were not equivalent. For all subjects, performance on the Manual version was better than on the Passive, which in turn was better than that on the Active PMT. Only the relatively high functioning students (mental age of six years and over) were able to complete all stimulus sets of the Active PMT. As expected motivation was high, and most subjects improved in the course of several sessions.

It appears that the accessing technologies (i.e. single switch or 5 switch) with their associated selection strategies place an added demand on the student, a demand which for some subjects exceeded the demands imposed by the visual matching process itself. These results were disappointing and sobering. They do not invalidate the claim that computer-assisted assessment and training could potentially diminish the discriminatory effects of standard assessment procedures, with regard to the physically disabled and low functioning subjects. Instead they have told us that the accessing technology used in this study raises a barrier rather than eliminating it.

Wrap Up

The projects discussed here are only a sampling of all research activities. Work on communication intervention, interaction studies, development of a modular wheelchair tray, evaluation of speech synthesis devices and a bevy of rehabilitation engineering projects (seating, mobility, gait, headware etc.) are ongoing.

This section of *Communicating Together* is sponsored by Manufacturers Life Insurance Company, Toronto, Ontario.

The cross fertilization of clinical ideas and clinical needs on the one hand and low and/or high technical and technological expertise on the other which occurs at an integrated rehabilitation centre is exciting and beneficial to both clinicians and clients. Near ideal as the HMMC/BCI environment may be there is one lacuna, a missing link in the chain of clinician, technologist, researcher, the client or user of a device. While efforts are made to make the users, clients and parents part of the service and research teams, there is not yet in place an organized or disorganized way of getting researchable issues and/or problems from the world into the labs and clinics. Given that researchers, engineers and clinicians are generally open to and sometimes actively looking for issues and problems, there ought to be more than one way to close this particular gap.□

References:

• Beaumont, J.G. "Microcomputer Aided Assessment Using Star Psychomentric Procedure". *Behaviour Research Methods and Instrumentation,* 1981, 13, (4,) 430-433.
• Staub, J., O'Bierne, H. and McNaughton, S. *Microcomputer Aides versus Manually Administered Procedures of a Visual Perceptual Matching Assessment and Training Task for Multiply Disabled Children.* Final Report to the Ontario Ministry of Community and Social Services and Ontario Mental Health Foundation. Hugh MacMillan Medical Centre; February, 1985.

Editor's Note:
Sources of funding for the projects described:

• Conn Smythe Research Foundation — Prism Tray, and Visual Perceptual Matching Studies.
• National Health Research and Development Program of Health and Welfare Canada — Single and Multiple Input and LOGO projects.
• Natural Science and Engineering Research Council — Talk-o.
• Ontario Ministry of Community and Social Services through the Ontario Mental Health Foundation — Computerized versus Manual PMT.

Picture Your Animals

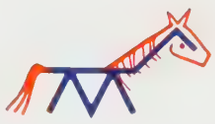
Some of the new symbols for animals were introduced in the last issue of *Communicating Together.* Instructors might want to embellish the symbols using another colour to make them easier to learn. See *Picture Your Blissymbols,* p. 8.

Features added can be simple or detailed.

horse

animal + pictograph of horse's head & neck

horse



animal & pictograph of horse's head & neck

Features can be added to one symbol component

rat

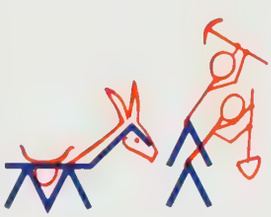
animal + teeth: an animal which gnaws to file its continuously growing teeth

rabbit

rodent + ear: a distinctive feature of a rabbit is its ears

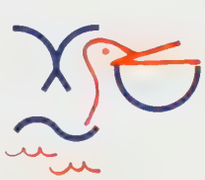
or to more than one component.

donkey



horse + to work: an animal which resembles a horse — commonly used to assist with work

pelican



water bird + container: a water bird with a pouch-shaped bill

Different features can be added to the same symbol to personalize it.

dog

animal + pictograph of tail

dog

dog

dog

Teaching and Learning

Movement, Manipulation and Bliss

by Jean Flynn and Sandra Henshall

Jean Flynn, a physiotherapist, and Sandra Henshall, her helper, wrote the following article about two of their clients at the Mary Denby Hospital in the United Kingdom. Ms. Flynn is presently Superintendent Physiotherapist at Olive Mount Hospital, Liverpool, England.

The following article is reprinted with permission from the Blissymbolics Communication Resource Centre (UK) Newsletter, *July 1983.*

Coming upon Joyce, resident in a long stay hospital, my immediate feeling was that she needed an alternative form of communication. She was 35, had a congenital hemiplegia, was deaf and her language was almost incomprehensible. Probably, she had been further handicapped by not wearing her hearing aid. Blissymbols for Joyce, I thought. Not Makaton because of the lack of use of her left hand.

We began to work regularly, in a small room within a very busy Occupational Therapy Department. It was slow. Joyce loved the sessions, but they really were for her only a way of getting one-to-one attention. Tactfully, I asked ward staff and O.T. staff to assist her, but it didn't work. Joyce was too slow to ask the staff for help. She was distractable and had small repetitious gestures common to many MR people if she was at all bored.

After about a year, the Therapy Department moved to another section of the hospital, so Joyce and I had no place to meet. She had a terrible tantrum when she thought our sessions were at an end.

Her Charge Nurse offered me a chance to work with Joyce at nine in the morning, twice a week, in a quiet lounge behind the ward. One other resident might be present: Marion, 44, deaf, unspeaking, given to playing "Contact 4" by herself. No problem there. she wouldn't bother me, I thought.

Six months later, Joyce, Marion, my helper Sandra and I were working together as a team. I'd gotten it all wrong. The priority was not an alternative language for these two women. The priority was to discover the delight of learning something, anything, with people who enjoyed their learning. We had been right to use Blissymbols. Through these symbols, Joyce has come to understand language and is faultless when we play "Jumble Sales". The game "Bliss Snap" teaches us all to exchange glances and to look everywhere, to correct and encourage each other, to score. Marion is very good at simple matching and she is already gazing at symbpls, lifting them up, turning them, finding the things which they represent. I am told that I should have used pictures for matching, but the beautiful abstract symbols appeal to Joyce and Marion. They can find them in their own books now.

Picking up the two-inch-square white pieces, adjusting them to their slightly imperfect sight, and also walking about holding the symbols helps. Some of us think better when we are moving.

Joyce has her plastic booklet with symbols for communication use, but at the age of 37, better use of Bliss for communication can wait a little longer until she has totally absorbed the symbols. Even if that should never happen, she and Marion have experienced the joy of learning.

The following are games we have used together.

Jumble Sales (Bliss users only)

As many "things" as we have "pieces" (Bliss symbols on two-inch-square white plastic coated cardboard) are required. The things, or pictures of things, are spread on several tables. Sandra and I sit, each with a set of pieces, at a distance. We take turns partnering with Marion and Joyce. We hand each of them a piece and they find the appropriate thing. They leave the thing where it is and bring back the piece to be put in a scoring pile. Sometimes we break off for revision and introduction of a new symbol. Somethings, they give us pieces and we have to find the things.

Bliss Snap

Each of us has an identical set of pieces in front of us as we sit at a "card table". The one who begins holds up a piece and we all find the replica in our own set. The starter waits till all have found it then puts her piece down first. The one to put her piece on top of the first piece wins. Scores are kept, and soon both Joyce or Marion will be doing this, we hope. Once the pieces are found, the putting on top is very competitive, and lots of fun, especially when Sandra and I introduce deliberate mistakes. A candy prize can be used.

Bliss Bingo

Ten boards, 16 blank pieces to "cover" and an overhead projector are required. Each board has 16 symbols set randomly among blank spaces and each symbol appears on one or more (up to four) boards. This game is not as easy as it might appear, as the scaling down from the overhead to the boards is sometimes a problem. This game is played in various parts of the hospital, by residents who would play bingo if they could. We use angled book rests for some residents. The pieces have blue tack behind to keep them on the boards.

Diamonds (Bliss users only)

Lots and lots of diamond shaped pieces, 5 inches by 3-1/2 inches each, with a big hole near the top. Each has a symbol and must be hung on a special board over cup-hooks (a manipulative problem). Things are hidden or lying about the room everywhere. They take the thing, plus its diamond, and place the thing in their own pile and the diamond on the board. Combinations can be used of course. The game can also become simply a matching one by first hanging diamonds with symbols on the board. □

Sharing Ideas with Nora

"Sharing Ideas with Nora" is a forum for sharing information concerning all aspects of Augmentative Communication. Nora Rothschild, Consultant with the Augmentative Communication Service of the Hugh MacMillan Medical Centre, heads up a regular column focusing on readers' questions, answers, problems and experiences.

At the Augmentative Communication Service, we have many enquiries about our assessment service. Unfortunately, our waiting period is a lengthy one, as in most clinics providing services to the nonspeaking person. The most common question that I hear is: "What can I do for my child while I'm waiting for your assessment"? My usual answer includes the following ideas.

Provide the child with opportunities to communicate relevant ideas and offer him/her models of how to communicate at a simple level. Ask yourself "What would this child say if s/he could talk?" When you are attempting to analyse what the child would want to say, don't be too concerned about how the child will be able to convey this information.

Determine what would be the most meaningful, functional and useful communication in order to alleviate the child's frustration as well as your own. Consider ideas which would make the child a happier person. Some ideas might include communicating messages such as "Leave me alone", "Please guess", "Can I have a hug?", "Come over and talk to me" or the names of people who are important to the child. Talk about activities during the day in which the child would like to participate. I usually find that vocabulary such as body parts, food and clothing are not items that are particularly motivating for children nor are they items which are frequently communicated by speaking people throughout a typical day.

Or you might begin by offering choices. This may be accomplished by providing specific objects or having the child point or distinctly look at desired objects and toys in the environment. For example, foods that are available for snack, choices between toys, TV or the stereo in the living room, etc. You can provide choices by offering pictures, photographs, symbols or gestures — whichever is easiest for the child to learn. You may, for example, wish to provide the child with pictures of his/her favourite activities to choose between at free time at school. These pictures, symbols or gestures might include choices for sand play, puzzles or bike riding. Start out simply and add vocabulary as situations arise. Above all, remember to use your common sense!□

Editor's Note:
If you have any ideas you want to share with other readers, or questions you want discussed, please write to "Sharing Ideas with Nora", c/o *Communicating Together.*

International News

Blissymbols for Chinese Cerebral Palsied Children in Hong Kong

by Chrisobel Flood

Chrisobel Flood is a speech therapist now living in Sydney, Australia. Recently she had the opportunity to work with Chinese cerebral palsied children in Hong Kong. She helped found the Association of Speech Therapists in Hong Kong and was its first Chairperson. She sent us the following account of her experience there.

It was the height of presumption for me, a western speech pathologist, to contemplate practising in Hong Kong with Chinese physically handicapped children. However, the grave shortage of speech pathologists there gave me the excuse I needed, and after studying the spoken language of Cantonese for six months, I launched myself upon some of the centres which were run jointly by the Hong Kong government and a charitable organization.

Before long, I discovered that the difficulties of nonverbal children in particular had been neglected, and that there was a large number of children desperate for augmentative communication systems. On discussing this problem with the higher echelons, I found that there was, quite rightly, unanimous rejection of using any system based on the English language. Cantonese is the language used amongst the Chinese in Hong Kong. Opinions ranged from "Of course, we should use Chinese characters" to "Blissymbolics is the *only* system we should use". These two statements seemed diametrically opposed — or were they? The arguments were endless and meanwhile nothing was being done for the children. So I, as speech pathologist, entered into the discussions. With my knowledge of only 30 or so Chinese characters I was hardly qualified to make a judgement. However I felt I was able to make some recommendations.

My colleague and friend Elsie Ho, a psychologist, devised a pilot study with me to evaluate Chinese characters and Blissymbolics with a view to assessing their suitability for use with the Chinese children. The study was designed to determine which system was learned more quickly and would be of more immediate use for communication purposes.

The following stages were carried out:

(1) The *Blissymbolics Manual* was used in preparation for the pilot study.

(2) Five children were selected. They were neither grossly mentally retarded nor were they hearing impaired. Due to difficulties in finding controls, each subject was his/her own control.

(3) An initial assessment was carried out, based on selected tests from the *Blissymbolics Manual*. An approximation of the Reynell Test of Language Comprehension was carried out. (This was a non-standardised translation into Cantonese.)

(4) An instruction period took place over six weeks. Ten selected "words" in the form of both Blissymbols and Chinese characters were taught, one at a time. The words chosen were "flower", "book", "pen", "television", "mother", "father", "to want", "to wash", "good", "to drink". The words had all been introduced in three weeks of instruction. The following three weeks involved reinforcing recognition and functional use of these "words" with both Blissymbols and characters as the mediums for communication.

(5) A final assessment was then carried out. Each child in turn was shown six symbols/characters at one time. Two of them denoted the same "word" and the examiner would ask the child to "point to" that word. The examiner was then able to see which the child selected, the character or the symbol. This was done so that each child was asked to identify each "word" a total of four times.

(6) Results were analysed. One child predominantly chose Chinese characters and two children predominantly chose Blissymbols. On further breakdown, the percentage of symbols chosen was almost double that of characters. Further analysis revealed that the children could learn to use both characters and Blissymbols together for nonverbal communication purposes but preferred to use symbols. The children with the lower intelligence levels in the study did not necessarily prefer to use Blissymbols (which are simpler to a westerner's eye than the characters). Concurrently those children of higher intelligence did not opt to choose the characters.

My interpretation of the study results has led me to recommend that Cantonese cerebral palsied children with poor motor skills should initially be taught Blissymbols as a nonverbal communication system (with the Chinese character written underneath the symbol). It is hoped this might encourage the children by giving them a feeling of success as they learn relatively quickly to communicate with those around them. Gradually, as they grow more confident in their successful communication, Chinese characters can be used if and when the children are ready for them. The Blissymbols can then be phased out.

As this was simply a pilot study, it is obvious that more work must be done for these children. At the moment the Hong Kong University Computer Department is devising a computer for use by nonverbal children. Hopefully advancements in this area will benefit these children in Hong Kong.□

This section of *Communicating Together* is sponsored by Pilot Club International, Ontario District.

Working with Jaime

by Marta Liberoff

Marta Liberoff, a speech pathologist, is Director of the Institute of Language and Special Education in Buenos Aires, Argentina. She is a past president of the Argentina Association of Scientific Study of Mental Deficiency.

Jaime is a 9-year-old boy, a cute big-eyed child, who is very loveable. He always maintains good eye contact and smiles frequently. He has been diagnosed as having athetoid cerebral palsy. He requires a wheelchair and his fine motor control is poor, but he can grasp objects and can point to them with his left hand.

Jaime and his family are originally from the Philippines. As a result of his father's occupation, the family has moved frequently, living in several Central and South American countries. They lived in Mexico for three years, where Jaime was enrolled in a biweekly speech and language program. It was at this program that his therapist introduced the use of a language board with Blissymbols as an alternate communication system. English is the primary language in his home, but Jaime has been exposed to Spanish in school.

I started to teach Jaime in May 1983 when his family moved to Argentina. At that time, he was able to recognize approximately 30 Blissymbols. I began working on increasing Jaime's vocabulary by adding new symbols, replacing pictures with the corresponding symbol one by one. When a new Blissymbol was introduced, I paired it with the actual object as often as possible.

Introducing him to the Pictogram Ideogram Communication (PIC) System was extremely useful. In order to increase Jaime's receptive vocabulary of action words and his expressive language, I designed additional communication boards using the mini-board framework.

A mini-board system consists of separate vocabulary boards, one for each activity or environment. Those boards contain vocabulary (nouns + verbs + objects) that are tailored to a specific situation. Each vocabulary was selected by looking into a specific situation and environment where Jaime spends time, and finding the most highly motivating activities and objects in that environment. For instance, Jaime has one vocabulary board specifically for picking out clothes in the morning. It contains Blissymbols combined with pictures. Another board contains vocabulary specifically geared to eating situations. He also works with separate mini-boards for certain subjects in the classroom, and certain areas in the home, leisure time activities, feelings (sad, happy, angry), etc.

Jaime always carries (on his wheelchair) his Blissymbols board and mini-boards, so that he can communicate with someone outside his familiar environment. For instance in the school where the language is Spanish, he also has a Blissymbol board translated into the Spanish language. Besides working with the Blissymbol system, I provide direct work on Jaime's speech which has improved notably. Currently he can produce two verbal utterances, although still of limited intelligibility.

Jaime's family will soon be moving to Brazil. That means Jaime will be exposed to the Portuguese language. The use of the International Symbol System will support Jaime permanently through his continuous changes of environment. I recommend that Jaime continue with therapy in English, because this is his primary language. The Blissymbol system should remain his alternative and augmentative system of communication.□

Schedule of Events

New Blissymbol/ Augmentative Communication Training Format

Now that the *Blissymbolics Independent Study Program* is available, the Blissymbolics Communication Institute is initiating four days of training sessions. On each day, a different topic will be addressed, allowing the instructor to choose one or more areas of learning. These sessions will be of interest to those who have completed Blissymbol Elementary Training, those who plan to take the Independent Study Program or those who have had some direct experience with augmentative communication system users.

In Ontario
- July 8-11, 1985 in Toronto

Topics:
Mon., July 8 — Current Issues in Augmentative Communication
Tues., July 9 — Blissymbols and Technology
Wed., July 10 — Blissymbols and the Educational Program
Thurs., July 11 — Blissymbols and the Retarded

Fee for day-long sessions:
$55.00 for one day
(lunch included).
$45.00 for each day, if more than one day is chosen.
Contact: Blissymbolics Communication Institute, 350 Rumsey Road, Toronto, Ontario, Canada M4G 1R8.
Telephone: (416) 424-3806

Sixth Annual Southeast Nonspeech Communication Conference

In Birmingham, Alabama
- October 25-26, 1985

Featured Speaker: Ms. Arlene Kraat

Contact: Pam Elder, 201 Sleepy Hollow Circle, Birmingham, Alabama 35216, U.S.A.

Purdue University Summer Institute

Purdue University offers two special two-week Institutes on **Meeting the Communicating Needs of the Severely Handicapped**

- ED528 Non Speech Communication. June 17-28.
  Course given by Lyle L. Lloyd.
- ED591Q Communication Intervention. July 1-12.
  Course given by George R. Karlan.

Contact: Lyle L. Lloyd, Ph.D, Professor and Chair of Special Education, Purdue University, SCC-E, West Layfette, Indiana 47906, U.S.A.

Assistive Device Center, California State University Summer Workshop June 8-10, 1985

Matching Assistive Devices to Skills and Needs of Individuals with Disabilities

An overview of available systems and devices to assist individuals in communication and educational access. Includes lectures and laboratory demonstrations as well as hands on experience.

Contact: Ms. Helen Woodall, Assistive Devices Center, School of Engineering, California State University, Sacramento, 6000 J. Street, Sacramento, California 95819-2694 U.S.A.
Telephone: (916) 454-6422

International Society for Augmentative and Alternative Communication

ISAAC Retreat In Ontario

- October 18-20, 1985, Collingwood, Ontario. Hosts: Penny Parnes, Shirley McNaughton, Peter Lindsay.

An opportunity for individuals concerned with the field of augmentative and alternative communication to meet in an informal setting and discuss current issues of interest.

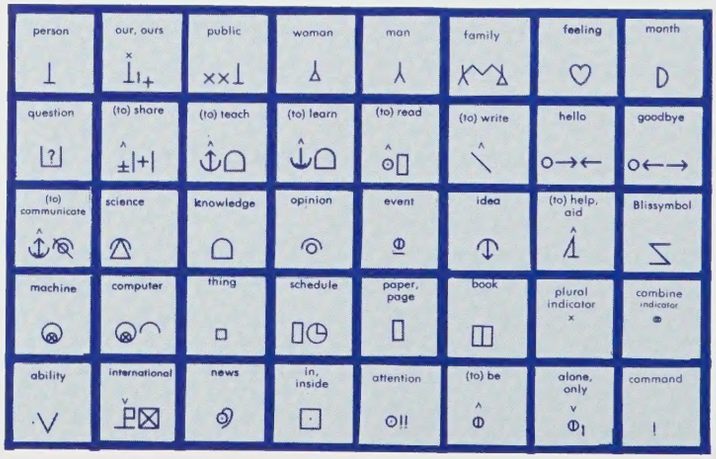
Fees: $215* ISAAC Members
$225* Non-members

*Double occupancy, includes accommodation and meals. A limited number of scholarships for users of augmentative systems are available.

Contact: Mrs. K. Seybold, ISAAC, P.O. Box 1762, Toronto, Ontario, Canada, M4G 4A3.
Telephone: (416) 424-3806

For Your Information

The Blissymbol components used in section headings and design are shown here with accompanying words.



A SERIOUS SOLUTION...TO A SERIOUS PROBLEM

The new ACS SpeechPAC™/Epson

The new ACS SpeechPAC/Epson is a technological breakthrough in design, function, and adaptation. It provides the nonverbal (child and adult) with communication capabilities never before available. SpeechPAC/Epson is what you need it to be.

AS A COMMUNICATOR: Turn it on and SpeechPAC automatically becomes the easiest to use, most advanced portable communication system available for nonverbal handicapped persons. It is 100% user programmable and can store hundreds of key sentences in memory for quick transfer to voice out-put or print.

TEXT TO SPEECH: Type any English words, numbers, sentences or paragraph; press TALK and SpeechPAC speaks out the entry. There are no complicated procedures or instructions to learn.

EASY TO PROGRAM: Simply press one button and the screen displays the three easy instructions for programming. No computer knowledge is necessary to use the SpeechPAC/Epson as a communication system.

LOGICAL LETTER CODING: An ACS exclusive program for nonverbal handicapped persons. "LOLEC"© gives a quick, uncomplicated method for the user to program and retrieve complete sentences (up to 250 characters long) from memory with a single key stroke. *EXAMPLE:* Every sentence has a "Logical Thought" and every thought has a "Logical Letter Code." Program DW to SPEAK "I would like to have a *DRINK* of *WATER*" Once programmed, the user simply enters DW, pushes TALK and the voice output is the entire sentence. Text to speech and numerous letter codes can be mixed together in any random sequence to create unlimited vocabulary potential.

MEMORY CAPACITY: Several hundred sentences can be stored for retrieval by "Logical Letter Coding". The SpeechPAC/Epson can store approximately 10,000 characters (letters) and is expandable to store 26,000 characters.

AS A COMPUTER: Push one button and you have access to all the features of the EPSON MicroComputer with: word processing, computer graphics, games (limited), calculator functions, musical tone generator, and hook up to TV set.

AS AN EDUCATIONAL AND TRAINING AID: With the Telephone Modem, the Epson connects to other computers and national information centers throughout the United States. This vast knowledge can be brought right into your own home.

SCANNING: For the severely physically handicapped, the ACS SpeechPAC/Epson can be activated by numerous types of gross motor switches. A custom ACS "Scanning Talk"© program presents letters and codes (on the screen) in the order of most frequent use. All functions of voice output, print, microcasette, and all computer functions can be controlled through scanning.

SPEECHPAC FEATURES: SpeechPAC talks for approximately 24 hours using the rechargeable batteries of the Epson computer. You can create Male, Female, and Child like voices. Control of Speed, Voice Type, Volume and Printer can be performed with only one finger (or head pointer) or scanning.

ACCESSORIES: Wheelchair Mounting Kit, Keyguards, Carrying Case, Telephone Modem, External Amplifiers, Emulator for connection to Apple or Franklin computers, Protective moisture proof keyboard cover.

ADAPTATIONS: If you already own an EpsonHX-20 you can make it talk and expand its memory with the purchase of only the ACS SpeechPAC and ACS copyrighted software program. Easy to snap together.

SIZE: 8½ x 14½ x 1¾'' WEIGHT: 5 pounds

PRICE: SpeechPAC/Epson - $2,195.00 U.S.—plus shipping/handling. SpeechPAC/Epson - $2,850.00 Canada—plus shipping/handling. Price subject to change depending on currency exchange rates.

Write today for free additional information.

In United States:

ACS

Adaptive Communication Systems, Inc.
Box 12440C Pittsburgh, PA 15231
412 264-2288

In Canada:

BETACOM

6160 VanDen Abeele
St. Laurent, Quebec H4S 1R9
514 335-1058

Happy Birthday Sweet 16!

ZYGO Model 16 that is. You're 10 years old and still scanning your way through assessments, evaluations, prescriptions and training. That's a tall order you're filling. You deserve a party!

You also set our company off on quite an adventure in developing the Model 100, scanWRITER, Eye Transfer, computer access and all those switches. And there's so much more to come.

You don't show your age at all. You're as good now as that day 10 years ago when you went to your first client. You're a classic; the industry standard.

Model 16.
Communication starts here!

ZYGO

Always there when you need us.

ZYGO INDUSTRIES, INC.
P.O. Box 1008
Portland, OR 97207-1008
(503) 297-1724